

Remarks

In the subject action, claims 1-3, 5-14, 16-20, 29-31 and 33 were rejected by the Examiner. Claims 1, 10, 13, 14 and 29 have been amended. Claims 4, 15, 21-28 and 32 were previously cancelled. Accordingly, claims 1-3, 5-14, 16-20, 29-31 and 33 remain pending in the application. Reconsideration of the application is respectfully requested.

Rejections under 35 U.S.C. § 103

Claims 1-3, 5-8, 10-11, 16-19, 29-30 and 33 were rejected under 35 USC 103(a) as being unpatentable over US 6,035,211 to Rabe et al. (hereinafter “Rabe”) in view of US 6,298,247 B1 to Alperovich et al. (hereinafter “Alperovich”). Claims 9, 12-14, 20 and 31 were rejected as being unpatentable over Rabe in view of Alperovich and further in view of U.S. Pat. No. 6,351,653 B1 to Alberth, Jr. et al. (hereinafter “Alberth”). Applicant respectfully requests reconsideration of these rejections.

1. Claims 1-3, 5-8, 10-11, 16-19, 29-30 and 33

In the FOA, Rabe was cited for teaching “first providing . . . a first audio signal at a first audio volume level . . .; determining . . . the first audio volume level . . .; and second providing . . . a second audio signal at a second audio volume level . . . non-intrusively lower than the first audio volume level initially . . .“

While Applicants respectfully submit that Rabe does not teach these features, either alone or in combination with Alperovich, Applicants have nonetheless amended independent claims 1, 10 and 29 (without prejudice) for the purpose of advancing prosecution. The amendments are fully supported by the disclosure as shown below.

As amended, claim 1 recites a method of operation in a mobile client device, the method of operation comprising:

first providing, by the mobile client device, a first audio signal at a first audio volume level to a user, the first audio volume level being selectable by the user; [pg. 4, lines 14-21; Fig. 1]

determining by the mobile client device, the first audio volume level at which the first audio signal is being provided to the user by the mobile client device; and [pg. 4, lines 31-32; pg. 5, lines 1-10; pg. 7, lines 1-8; pg. 9, lines 3-10; Fig. 1; Fig. 3a]

while providing said first audio signal to the user at the first audio volume level, providing, by the mobile client device, to the user a second audio signal at a second audio volume level [pg. 4, lines 31-32; pg. 5, lines 1-2 and 12-21; pg. 10, lines 2-25; Fig. 1; Fig. 3a; Fig. 3b], the second audio volume level being variably controlled by the mobile client device based on said first audio volume level and [pg. 5, lines 3-11; pg. 6, lines 21-26; pg. 9, lines 11-19 and 26-27; pg. 10, lines 5-25; Fig. 1; Fig. 3a; Fig. 3b] the second audio volume level being non-intrusively lower than the first audio volume level initially; and

while providing the first and second audio signals, incrementally increasing, by the mobile client device, the second audio volume level from the initial non-intrusive lower volume level to a discernable volume level higher than the first audio volume level.

Viewing amended claim 1 as a whole, as required by law, the recited method requires the provision of a first audio signal at a first volume level that is selectable by the user and the determination of the first audio volume level at which the first audio signal is being provided to the user. Claim 1 further requires (while providing the first audio signal at the first volume level) the provision of a second audio signal at a non-intrusive volume level lower than the first audio volume level initially, and incrementally increasing the volume level of the second audio signal to a discernable volume level higher than the first audio volume level. This novel method potentially provides an advantage over the prior art because it is less intrusive and more convenient method of alerting the user to the second signal, without e.g., startling or harming the user, while the user is enjoying the first audio signal at a volume level selected by the user.

Rabe, cited as the primary reference, teaches a flip mechanism or switch for limiting the amplitude output of a speaker for a mobile telephone while the telephone is

in “active” mode. In one embodiment, a flip phone includes a speaker 18 and a tuned cavity 20 that are aligned when the phone is folded (“standby” mode), amplifying speaker 18 output. These components are separated when the phone is open (“active mode”), preventing the amplification of the speaker 18 output by the tuned cavity 20. In other embodiments a switch can be used in place of, or in addition to, the flip mechanism to toggle between the modes, and/or an amplifier or limiter may be added between the components.

In all embodiments, Rabe teaches that the phone has two modes – one in which audio output is amplified or is not limited (“standby/inactive mode”), and one in which audio output is limited or is not amplified (“active mode”). This does not conflict with the Examiner’s assertion that the mode is *directly related* to volume level or amplification (FOA pg. 22, Item 4).

But Rabe fails to teach the recitations of amended claim 1. First, Rabe does not teach “determining, by the mobile client device, the first audio volume level at which the first audio signal is being provided to the user by the mobile client device.” This recitation requires the “determining” of the “first audio volume level” to occur **while** the “first audio signal” is being provided at the first volume level, which is “selectable by the user.” The “determining” could not occur before the signal is provided to the user by the mobile client device because a signal that is not being provided logically cannot have a volume level at which it is being provided.

Instead, Rabe discloses a telephone that amplifies/limits audio signals *as a function of the telephone’s mode*. Even if the telephone disclosed by Rabe could be said to “determine” whether the phone is in the active mode before amplifying/limiting an audio signal (Applicants do not concede this), any ‘determination’ of mode that could occur must necessarily be made **prior to** amplification/limiting of a signal, because the amplification/limiting of the signal occurs as a function of the mode. Once this has occurred, there is simply no reason for the telephone to then determine the audio level at which the signal *is being provided* to the user, and Rabe does not teach or even

suggest doing this. At most, the mode of the telephone is “directly related to” the volume level or amplification in the sense that the mode *affects* the volume at which a signal is provided. Applicants respectfully submit that this does not suffice to teach “determining . . . the first audio volume level . . .” as recited in claim 1.

Applicants note that while “determining” may sometimes be interpreted to mean “deciding” (e.g. deciding at what volume level to provide an audio signal), this interpretation is eliminated by the claim language. If “determining” the “first audio volume level” meant “deciding the first audio volume level,” it would necessarily occur before providing the first audio signal *at the first audio volume level*. It could not occur while the first audio signal was being provided, as explained above. But to further clarify the intended meaning, Applicants have amended claim 1 to recite that the first audio volume level is “selectable by the user.” Thus, while the mode of Rabe’s telephone may in part *decide* whether amplification/limitation of signal output occurs, and/or may *affect* the relative volume level of the audio output through amplification/limitation of the output, it is not possible for the telephone of Rabe to *determine* an audio volume level of an audio signal *that is being provided*.

Therefore, Rabe cannot teach or suggest “determining, by the mobile client device, the first audio volume level at which the first audio signal is being provided to the user by the mobile client device.”

Second, Rabe does not teach “while providing said first audio signal to the user at the first audio volume level, providing, by the mobile client device, to the user a second audio signal at a second audio volume level, the second audio volume level being variably controlled by the mobile client device based on said first audio volume level and the second audio volume level being non-intrusively lower than the first audio volume level initially.”

Rabe teaches no “second audio signal.” Rabe merely teaches that “active” and “inactive/standby” modes are modes in which a phone is open or closed, or in which a switch is on or off. The mode has no bearing on whether a signal is being provided. Rabe teaches only one audio signal being provided at a time, but the “second audio

signal" of claim 1 is provided "while providing said first audio signal." Therefore, Rabe cannot teach "providing . . . a second audio signal."

As Rabe does not teach the second audio signal of claim 1, Rabe also cannot teach the second audio volume level, which is the audio volume level of the second signal). Therefore, Rabe cannot teach "the second audio volume level being variably controlled by the mobile client device based on said first audio volume level" or "the second audio volume level being non-intrusively lower than the first audio volume level initially."

In addition, even if Rabe could suggest to a person having ordinary skill in the art that a second signal could be provided while providing the first audio signal, Rabe **still** would not teach these recitations. As discussed above, Rabe discloses that the telephone amplifies/limits the audio signal as a *function of the mode*. If Rabe disclosed providing a second signal while the first signal was being provided, as is required by claim 1, the telephone would be in a single mode while providing both signals. Thus, **both** signals would be **equally** amplified/limited.

For at least these reasons, Rabe cannot teach or suggest the elements of amended claim 1.

Alperovich cannot remedy the above discussed deficiencies of Rabe. Thus, for at least these reasons, amended claim 1 is allowable over Rabe, even when combined with Alperovich.

Nonetheless, Applicants note for the record that contrary to the Examiner's reading of Alperovich, this reference **teaches away** from the recitation for which it is cited.

The portion of claim 1 for which Alperovich was cited currently recites, as amended, "while providing the first and second audio signals, incrementally increasing, by the mobile client device, the second audio volume level from the initial non-intrusive lower volume level to a discernable volume level higher than the first audio volume

level." Claim 1 also requires the "second audio signal" to be provided initially at a "second audio volume level" that is "non-intrusively lower than the first audio volume level." This second audio level is then "incrementally" increased "to a discernable volume level higher than the first audio volume level."

In contrast, Alperovich discloses a method of increasing amplification of a desired audio signal and decreasing amplification of an undesired audio signal (e.g. external noise). Thus, while Alperovich teaches minimizing the secondary signal, claim 1 recites a method in which a secondary signal is incrementally increased until its volume exceeds that of the primary signal.

In the 'Response to Arguments' section of the FOA, the Examiner asserted that the disclosure of "perform volume control function by performing selected filter gain on primary audio signal 406 based on secondary audio signal 408" teaches the above feature of claim 1. But claim 1 does not recite adjusting the primary (first) audio signal based on the secondary (second) audio signal; in fact, claim 1 does not recite adjusting the first audio signal at all.

Similarly, the "Increase/Decrease volume command" of Figure 3 was cited for teaching the above feature of claim 1. But Alperovich teaches that this command, which is sent to volume control 104 by volume control application 120, is based on a comparison of external noise data to the subscriber's desired volume control data from database 122 (col. 3, lines 7-18; Fig. 3). Alperovich then discloses that the command is translated to a hardware operation to adjust the volume of speaker 112 and/or separate microphone 114, which are sources of external noise (col. 3, lines 18-20). In both receiving/listening mode and talking mode, the primary audio signal is adjusted based on the secondary audio signal (see e.g. col. 3, lines 29-42 and 66-67 and col. 4, lines 1-2). Claim 1, however, requires the "second audio signal" to be provided "at a second audio volume level . . . based on said first audio volume level" (i.e. the level at which the first audio signal is being provided).

Finally, the Examiner asserts that claim 1 reads upon the case wherein the user has selected a gain for the desired signal and not selected any gain (gain of zero) for undesired signal (FOA, pg. 23 item 4). But this still results in the *amplification of the*

primary signal with no effect on the secondary. And in any case, the user **could not select the gain** for either signal. On the contrary, Alperovich discloses that the mobile station 100 creates a database based on the subscriber's manual adjustments to the volume of the mobile station 100, which are made in response to different levels of background noise (col. 2, lines 59-67; col. 3, lines 1-6 and 39-46; "levels" set in database 122 are volume levels, database 122 associates volume levels with noise measures when user manually adjusts volume). The **gain** of both signals is **adjusted automatically** by the mobile device 100 after comparing measured background noise to the data pertaining to the user's preferred volume levels stored in the database (see col. 3, lines 9-20 and 39-46; also col. 4, lines 10-11). The user can manually control the volume of the mobile station, but the user cannot select a gain for either signal because this is done by the mobile station – the automation of the filter gain and frequency adjustments (automated system for adaptive volume control) is the essence of the invention disclosed by Alperovich. Claim 1 cannot read on the case where a user selects a gain for one signal and a gain of zero for the other, because such a case is not encompassed by the teachings of Alperovich.

Nor can Alperovich suggest the recitations of amended claim 1. The disclosure of Alperovich merely provides a logical solution to the problem of background noise by enhancing a desired audio signal over an undesired audio signal when both a desired signal and an undesired signal are present. This reference does not disclose any method by which to provide a second signal while providing a first signal when both signals are desirable. In particular, Applicants submit that the logical solution of increasing the volume of a primary, desired audio signal and decreasing the volume of a secondary, undesired audio signal to minimize background noise does not suggest to a person of ordinary skill in the art a method by which to unobtrusively introduce a second desired signal while providing a first desired signal, nor does it provide the advantages of Applicants' method.

Accordingly, for at least these additional reason, claim 1 is non-obvious and

allowable over Rabe in view of Alperovich.

Claims 2, 3, and 5-8 depend from claim 1, incorporating its recitations, and are thus allowable over Rabe in view of Alperovich for at least the same reasons.

Independent claims 10 and 29 have been amended to include recitations similar in substance to those discussed above for claim 1, and are thus allowable over the combination of Rabe and Alperovich for at least the same reasons. Claim 10 is further allowable over Rabe and Alperovich because it recites a wireless mobile phone configured to be able to *terminate* the second audio signal, preventing the second audio signal from intruding on the first audio signal responsive to a user action. Neither Alperovich nor Rabe suggests any method for terminating the secondary audio signal.

Claims 11 and 16-19 and claims 30 and 33 depend from claims 10 and 29, respectively, incorporating their recitations, and are thus allowable for at least the same reasons.

2. Claims 9, 12-14, 20 and 31

Claims 9, 12-14, 20 and 31 were rejected under 35 USC 103(a) as being unpatentable over Rabe in view of Alperovich and further in view of U.S. Pat. No. 6,351,653 B1 to Alberth, Jr. (hereinafter “Alberth”). However, Alberth does not remedy the deficiencies of Rabe and Alperovich with regard to claims 1, 10, and 29, from which claim 9, claims 12-14 and 20, and claim 31 depend, respectively. Thus, Applicants respectfully submit that claims 9, 12-14, 20 and 31 are allowable over Rabe in view of Alperovich and further in view of Alberth.

Conclusion

In view of the foregoing, reconsideration and allowance of claims 1-3, 5-14, 16-20, 29-31 and 33 is solicited. If the Examiner has any questions concerning the present paper, the Examiner is kindly requested to contact the undersigned at (206) 407-1513. If any fees are due in connection with filing this paper, the Commissioner is authorized to charge the Deposit Account of Schwabe, Williamson and Wyatt, P.C., No. 50-0393.

Respectfully submitted,
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